

# Indutherm VTC Machines

## Vacuum Tilt Casting Machines



The VTC 100V - VTC 800V are extremely versatile casting machines suitable for a wide range of applications – and a number of options that were considered mutually incompatible up to now. Thus, while the VTC series was originally designed as a high-temperature casting machine for casting steel, palladium, platinum etc. (max. 2,000°C), the large flask capacity ensures more production and reduced costs when casting in gold, silver, copper, aluminum and other materials.

	<b>VTC 100V 78-T4100 (78-T4100-TN)</b>	<b>VTC 200V 78-T4200 (78-T4200-TN)</b>	<b>VTC 400V 78-T4400 (78-T4400-TN)</b>	<b>VTC 800V 78-T4800 (78-T4800-TN)</b>
<b>Maximum Power / Electrical</b>	12 KW / 3x400V	15 KW / 3x400V	20 KW / 3x400V	20 KW / 3x400V
<b>Maximum Temperature</b>	2100°C	2100°C	2100°C	2100°C
<b>Graphite Crucible Volume</b>	25 ccm = 450 gr Au 18 ct	145 ccm = 2.0 kg Au 18 ct	300 ccm = 4.0 kg Au 18 ct	600 ccm = 4kg steel
<b>Ceramic Crucible Volume</b>	30 ccm = 600 gr Pt / 250 gr steel / (95gr Ti)	180 ccm = 2.5 kg Pt / 1 kg steel / (450gr Ti)	300 ccm = 2.0 kg steel / (900gr Ti)	600 ccm = 4.0 kg steel / (1800gr Ti)
<b>Maximum Flask Capacity</b>	125mm DIA x 220mm H	125mm DIA x 220mm H	125mm DIA x 220mm H	125mm DIA x 220mm H
<b>Vibration Technology</b>	Standard Equipment - Sweep Mode	Standard Equipment - Sweep Mode	Standard Equipment - Sweep Mode	Standard Equipment - Sweep Mode
<b>Automatic Tilting With Motor Drive</b>	Standard Equipment	Standard Equipment	Standard Equipment	Standard Equipment
<b>Automatic Flask Fixing</b>	Standard Equipment	Standard Equipment	Standard Equipment	Standard Equipment
<b>GSM Modem For Remote Service</b>	Standard Equipment	Standard Equipment	Standard Equipment	Standard Equipment
<b>Pyrometer With Video Output</b>	Optional Equipment	Optional Equipment	Optional Equipment	Optional Equipment
<b>Dimensions (WxDxH)</b>	700mm x 800mm x 1500mm	700mm x 800mm x 1500mm	700mm x 800mm x 1500mm	700mm x 800mm x 1500mm

**The VTC 100V - VTC 800V** are extremely versatile casting machines suitable for a wide range of applications. While the VTC series was originally designed as a high-temperature casting machine for casting steel, palladium, platinum, and more... Maximum temps up to 2,100°C, large flasks also make it suitable for economically producing casting in gold, silver and other materials.

The machine combines a dual-chamber differential pressure system with a tilting mechanism. The casting process is achieved by rotating the entire melting-casting unit by 90°. One benefit of the tilting system is the use of economically priced graphite or ceramic crucibles (without holes and sealing rods), these tend to have a longer service life. Some alloys, such as copper beryllium, quickly cause crucibles with holes and sealing rods to become loose and therefore useless, and for this reason, many casters have so far processed such alloys only in open systems – which means they can't choose to optimize the process with overpressure or vacuum.

With the VTC series, these handicaps no longer apply. A vacuum can be produced in the melting chamber and the casting chamber to avoid oxidation processes during melting and air pockets in the casting mould. The flask is automatically pressed against the melting chamber for casting, this makes it possible to switch to overpressure during casting for better mould filling; in addition, the vibration technology optimizes the process even further. As well as casting with flasks, casting into ingot molds is also possible.

### Sweep mode vibration system for perfect results even in Pt and Pd

Due to the advanced vibration technology working with variable frequencies and the sophisticated vacuum/pressure system, this machine is perfectly suited to casting platinum and palladium.

### Handling and Control

Operation is simple and safe thanks to a clearly arranged and easy-to-use LCD display.

### The High vacuum casting systems VTC 100V Ti - VTC 800V Ti

Highly reactive metals such as titanium, copper, beryllium, amorphous steel, etc. can be challenging to cast. Following numerous modifications such as heavy duty valves and hose connections, special seals and an evacuation and inert gas flushing process tailored to the machine which can produce a full vacuum of 10<sup>-6</sup> Cu. Mbar.

